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1.	A novel structure for a photodiode comprising:
	a p-type region extending to the surface of a semiconductor
	substrate;
	a multiplicity of parallel finger-like n-wells formed in said p-type
	region that are connected to a conductive region at one end.

- 2. The structure of Claim 1 wherein said p-type region is a p-substrate.
- 3. The structure of Claim 1 wherein said p-type region is a p-well.
- 4. The structure of Claim 1 wherein said parallel finger-like n-wells are formed by phosphorous ion implantation.
- 5. The structure of Claim 1 wherein the depth of said parallel fingerlike n-wells is between about 1 and 5 microns.
- 6. The structure of Claim 1 wherein the width of said parallel fingerlike n-wells is between about 0.5 and 2 microns.
- 7. The structure of Claim 1 wherein the separation of said parallel finger-like n-wells is between about 0.5 and 2 microns.
- 8. The structure of Claim 1 wherein the number of fingers in said parallel finger-like n-wells is greater than 3.
- 9. A method of fabricating a novel structure for a photodiode comprising:

Providing a p-type region of a semiconductor substrate extending to the surface of said semiconductor substrate;

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Forming a multiplicity of parallel finger-like n-wells in said p-type region that are connected to a conductive region at one end.

- 10. The method of Claim 9 wherein said p-type region is a p-substrate.
- 11. The method of Claim 9 wherein said p-type region is a p-well.
- 12. The method of Claim 9 wherein said parallel finger-like n-wells are formed by phosphorous ion implantation.
- 13. The method of Claim 9 wherein the depth of said parallel finger-like n-wells is between about 1 and 5 microns.
- 14. The method of Claim 9 wherein the width of said parallel finger-like n-wells is between about 0.5 and 2 microns.
- 15. The method of Claim 9 wherein the separation of said parallel finger-like n-wells is between about 0.5 and 2 microns.
- 16. The method of Claim 9 wherein the number of fingers in said parallel finger-like n-wells is greater than 3.
- 17. A novel structure for a photodiode comprising:

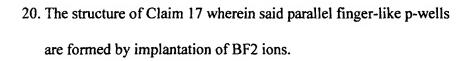
  an n-type region extending to the surface of a semiconductor substrate;

  a multiplicity of parallel finger-like p-wells formed in said n-type region that are connected to a conductive region at one end.
  - 18. The structure of Claim 17 wherein said p-type region is an n-substrate.
  - 19. The structure of Claim 17 wherein said p-type region is an n-well.

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- 21. The structure of Claim 17 wherein the depth of said parallel fingerlike p-wells is between about 1 and 5 microns.
- 22. The structure of Claim 17 wherein the width of said parallel finger-like p-wells is between about 0.5 and 2 microns.
- 23. The structure of Claim 17 wherein the separation of said parallel finger-like p-wells is between about 0.5 and 2 microns.
- 24. The structure of Claim 17 wherein the number of fingers in said parallel finger-like p-wells is greater than 3.
- 25. A method of fabricating a novel structure for a photodiode comprising:

Providing an n-type region of a semiconductor substrate extending to the surface of said semiconductor substrate;

- Forming a multiplicity of parallel finger-like p-wells in said n-type region that are connected to a conductive region at one end.
- 26. The method of Claim 25 wherein said n-type region is an n-substrate.
- 27. The method of Claim 25 wherein said n-type region is an n-well.
- 28. The method of Claim 25 wherein said parallel finger-like p-wells are formed by implantation of BF2 ions.
- 29. The method of Claim 25 wherein the depth of said parallel fingerlike p-wells is between about 1 and 5 microns.

- 30. The method of Claim 25 wherein the width of said parallel fingerlike p-wells is between about 0.5 and 2 microns.
- 31. The method of Claim 25 wherein the separation of said parallel finger-like p-wells is between about 0.5 and 2 microns.
- 32. The method of Claim 25 wherein the number of fingers in said parallel finger-like p-wells is greater than 3.